1: Underhill E-5 (1931-1935)1946 NU28 Papago NU28

shaman began to think about his pay and some introduced hints into their songs. One is reported to have sung:

Don't give me beads,
I am not young and handsome.
Give me a horse; a horse!

A horse or cow was the usual pay, and the family generally brought in a piece of manure to indicate what it would be. If diagnosis were difficult, the shaman might have to sing on other nights (four was the ritual number) before he earned his pay. Usually before dawn he announced what curing singer must be sent for, or else he himself sucked out the disease object. Some shamans did not suck, "because they did not have it in their dreams." They merely recommended that another shaman be called.

If the specialists he had recommended produced no result, a shaman would diagnose again, without further pay. He might thus recommend several curing singers in succession, and if all failed, the blame was not theirs, but his. That such happenings were not infrequent is evidenced by the Papago slang term for shaman, which is "liar."

THE FEMALE SHAMAN

The myths occasionally mention a female shaman who was powerful and whose magic succeeded where that of her male colleagues had failed. In practice, the writer heard of but few female shamans, and these held a very subordinate position. Denied any connection with shamanism until after childbearing age, women often became herbalists[6] and then drifted into a limited shamanism by means of a vision or two. As with white women doctors, circumstances often pushed them into specializing in children's diseases.

One woman known to the writer practiced a peculiar form of therapy which might have seemed her own idiosyncrasy had it not turned out to be an ancient Aztec practice.[7] This was pressing on

[6] See p. 90. [i.e., read p. 300.—Ed.] [7] Sahagún, Seler, p. 366.

1: Underhill E-5 (1931-1935)1946 NU28 Papago NU28

757 the palate of an infant. Pressure was supposed to close the fonta-
171 nelle, "because it was soft and it was making the child sick." The Aztec woman held the child upside down for the same reason.

SORCERY[8]

754 If the shaman's diagnosis or his treatment failed, he was open to the charge of murder by sorcery. Such an idea was never far from the Papago mind, and the early Jesuits found it rampant.

> The whole country is given over to witchcraft. . . . Many fatal illnesses and sudden deaths are due to witchcraft. . . . Witches even kill each other.[9] In all the ranches or villages there have always been one or more sorcerers.[10]

[683] The result has been many a shaman clubbed to death or shot by a surreptitious arrow, with the consent and sometimes the thanks of the village authorities.

The San Xavier calendar stick[11] recording the events of eighty years mentions several such occurrences, generally as the result of an epidemic or drought. "They found it was an evil shaman who was causing the trouble, so they killed him." Shamans were suspected of burying fire in the earth, thus turning away the clouds, and preventing rain. They might swallow burning coals, spit out fire, and cause disease. They might put poison into a coyote, which would go mad and spread rabies. They might send darkness over a patient so that the crystal of the officiating shaman could not penetrate it and show the cause of disease. Or they might swallow the poison of a rattlesnake or gila monster and blow it over patients when they blew saliva, ostensibly as a cure.

No one could tell when a shaman's power might cause him to act in this way, for it happened sporadically and perhaps without his own volition. The change brought no material gain, for people ceased to employ him. Nor did he attain sovereignty over the souls of those he killed, like the Mohave shaman, or the help of evil spirits like the European witch. His power from his animal guardian remained what it had always been, but, perhaps because

[8] Russell (p. 262) describes similar shaman sorcery among the Pima.
[9] Apostolicos afanes, pp. 258, 240. [10] Rudo ensayo, p. 171. [11] Underhill, 1938a.

2: Underhill E-5 (1931-1935)1939 NU28 Papago NU28

847 If the baby died and the woman wanted another, she buried it near the surface. If she wanted no more, she buried it deep. Women [848] professed to know nothing about means of abortion saying that there was little need for them, since an unmarried mother suffered no stigma. Deformed babies and those born by "light women" who did not want the burden were dropped in an arroyo to die of [843] exposure. It was considered that a woman who had a husband and did not bear children would soon die herself of the unnatural condition.

845 Twins were considered to be born shamans. People regarded 756 both them and their parents with some awe, since whatever they said would come true. Thus, if they said a certain person would die, he would: if they called him ugly, swollen, lame, he would become so. Therefore everybody made offerings to twins (the word used is the same as that for offerings made at a shrine). Their parents did the same. Anyone who rebuked a twin suffered. One informant slapped the cheek of a twin who annoyed her while gambling and immediately her arm swelled. She went to the twin for relief, bringing a gift. The child wet her fingertips in her mouth and touched the arm which immediately healed.

This power of twins did not persist beyond childhood unless they had dreams and became shamans in the regular way. However, they usually did so and were much more likely to dream than the average person. If one twin died, the other died also.

CHILDHOOD

[862] Babies were nursed until they were two and three years old. 753 One informant said, "My babies died. It was because they came 853 too fast. When there was a new one coming, there was not milk for the old one" (26). The cause of most infant complaints was supposed to be the fact that the fontanelle did not close properly. A shaman or an old women who had dream power inserted a finger in the child's mouth and pushed on the palate. This was thought to push up the [757] whole top of the head and close the fontanelle. Diarrhoea was treated with the vapor of canyon ragweed. The leaves were wet and a hot cloth laid over them, then the infant was set on the cloth in the vapor. Children's fevers were thought to be due to the hot breath of a dog. They and other diseases were treated in the regular way by the shaman.

854 The child was carried on the cradleboard until it was able to walk. Mothers, on their long expeditions to fetch food and water, placed the cradleboard on top of the other contents of the carrying basket and while they worked, stood it against a tree. When the

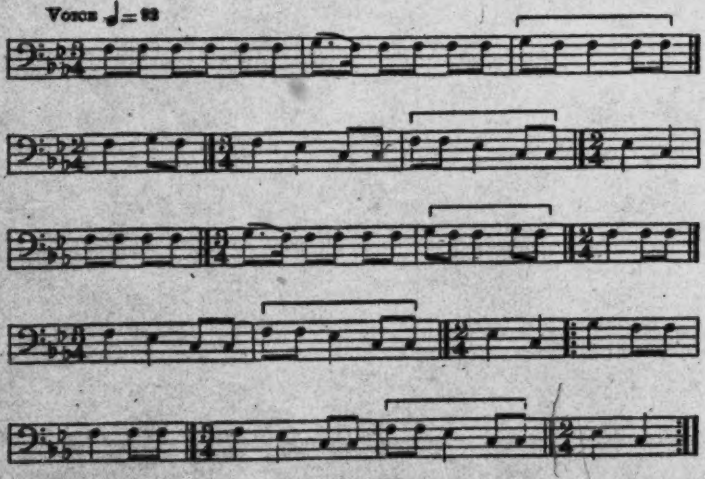
6: Densmore E-5 (1920)1929 NU28 Papago NU28

If several sorts of this treatment had been tried without effect the second method of treatment was used as a last resort. This was by internal medicine. Those who treated by material remedies usually worked in pairs, either two men or a man and his wife. Together they made a decoction of certain herbs, according to instructions received in a dream. The dosage and manner of administering were also directed by a dream. When giving the treatment two such persons were accustomed to seat the patient so that he faced the west. They placed a bowl of medicine in front of him, telling him to look fixedly into the bowl and not move his eyes. Then they took their seats behind him and sang the following song, no rattle being used. The singing was in a tone that resembled humming, and was so low that only the sick man could hear it. They sang the song four times, then went around from opposite sides, took up the bowl of medicine and gave it to the sick man to drink.

No. 47. Song when Administering Herb Medicine

(Catalogue No. 1041)

Recorded by JOSE PANCO



TRANSLATION

Are you going to make a doctor out of me?
You have brought me in here and I see.

Analysis.—The most prominent tone in this song is F but the song is analyzed with C as its keynote. There is an interesting completeness in the rhythm of the song as a whole. The first two periods each contain seven measures and bear a general resemblance to each other but the final period begins with a quarter note and a more positive rhythm, returning to the rhythmic unit in the measure

[i.e. magical therapy — Analyst.]

6: Densmore E-5 (1920) 1929NU28 Papago NU28

before the close. Only five intervals are larger than a minor third and all these occur in ascending progressions.

Mr. Encinas, the writer's interpreter, said that he once took an herb treatment and that his health was improved for a period of eight years. The medicine was a powerful purgative, yellowish in color and consisting of only one herb. It had no definite taste, and he was required to drink almost a quart of it morning and evening for two consecutive days. There were no songs connected with this treatment. The medicine man died a few years after Mr. Encinas received the treatment, and as he left no son the identity of his medicinal herb has been lost. It was customary to "talk to the plant or tree" when gathering a medicinal substance and also when administering it.

The following list shows animals and birds said to cause disease, with the symptoms of the ailments.[11] Songs used in treating the first five ailments were recorded.

Deer	Weakness and cough.
Badger	Swelling of the throat.
Horned toad	"If a person steps on a horned toad and kills it he will have a large sore on the part of his body corresponding to the injured part of the toad."
Rattlesnake	Pain around the heart.
Lizard (brown)	Severe internal fever.
Bear	Swellings and soreness.
Dog	Mouth affected, no appetite.
Gopher	Pains around the heart.
Jack rabbit	Boils, especially on the neck.
Rat	Soreness of mouth, affects only infants.
Turtle	Severe lameness.
Blue hawk, eagle, woodpecker	Symptoms not given but were said to be the same in diseases caused by these birds.
Butterfly	Dysentery.
Quail	Sore eyes.
Owl	Sleepiness.
Woodpecker	Boils and sores on the head.

Sickness Caused by Spirit Animals or Birds

Jose Panco (pl. 14, *b*), who recorded the next five songs, is using them at the present time (1920) in treating persons suffering from the "deer sickness." He received the songs from his grandfather, who told him of their origin. Not many miles from San Xavier is a mountain called "Kawit" and below this is a village. Panco's grandfather said there once lived in this village a man who went out to hunt every day. On his last hunt he had gone quite a distance when he saw a deer running toward him. The deer came toward him, then turned and ran away from him, going toward the west.

[11] For a longer list see Frank Russell, op. cit., pp. 260-265.

13:Davis E-5 (1920) 1920 NU28 Papago NU28

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over the liquor is ready to drink. If it is not consumed when fully ripe, it becomes water and loses its intoxicating qualities. In color it is blood-red and tastes like sour wine. There were nine large ollas in this house, containing twelve to fourteen gallons each, so that in all, about 120 gallons must have been consumed.

The old keeper doled the liquor in small, two-quart ollas, from which the Indians drank, passing them from mouth to mouth until all was consumed, and the ollas ready to be refilled. The Indians claim that the liquor is good for them, as it cleanses the system either as an emetic or as a cathartic. It was given to them by "Montezuma," together with the saguaro and other desert products. During the drinking there was neither quarreling nor fighting.

[757]

[773]

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Within a quarter of a mile of Quitovaquita, at the place where the monster is said to have perished, there appears to be a great deposit of lime-like earth, and in some places limestone. This doubtless hides the skeletal remains of many large prehistoric animals, since we there found

MEDICINAL PLANTS

755 757 Papago medicine men cured by singing, sucking, blowing tobacco smoke, and waving eagle feathers over the patient. However, for ordinary ailments, there were common cures which every family knew, although complicated mixtures were often used by a housewife familiar with her pharmacopeia. This practical knowledge was often in the hands of women who gathered the herbs in season, dried and pounded them in a special mortar.

● 757 278 The most universal remedy was the creosote bush *(Covillea glutinosa)*. It was used for stiff limbs, sores, and poisonous bites. Men, after running all day barefoot, would make a fire, and when it had burned out heap creosote branches on the ashes and hold their aching feet in the smoke. Women after childbirth or with menstrual cramps would lie on a bed of such heated branches. For rheumatism, the hot branches were wrapped in a cloth and laid on the joints. In case of a snake, spider, or scorpion bite, creosote leaves were chewed and placed on the swelling. The leaves were also boiled and given to the patient as an emetic.

For sore throat, the root of cañaigre *(Rumex hymenosepalus)* was pounded and swallowed dry, or a piece of the root might be held in the mouth. The effect was to coat the mucous membrane and make it less sensitive.

The remedy for toothache may have been merely a counter irritant. It was to bite and hold between the teeth either the wild bean *(Phaseolus acutifolius)* or the callous which grows on the branches of mesquite.

COLDS

Mesquite mistletoe, *kui haap*, leaves boiled and drunk.

SORE THROAT

Cañaigre, *siwitcuris (Rumex hymenosepalus)*, root powdered and eaten.

17:Castetter & Underhill N.E-5 (1931-1934) 1935
NU28 Papago NU28

STOMACH AND MENSTRUAL CRAMPS

Creosote mistletoe, *cikoi haap (Phoradendron* sp.), leaves boiled and liquid drunk for stomach and menstrual cramps; for menstrual cramps woman also lies on heated branches.

Dandelion *(Taraxacum officinale)*, blossoms steeped in hot water to make tea for women with menstrual cramps.

RHEUMATISM

Creosote bush, *cikoi (Covillea glutinosa)*, lay heated branches on joints.

SORE FEET

Creosote bush, *cikoi (Covillea glutinosa)*, hold feet in smoke made by smoldering green branches.

CHILDBIRTH

Creosote bush, *cikoi (Covillea glutinosa)*, woman lies on heated branches; dried pulverized leaves steeped in hot water and liquid rubbed on breasts to start milk flow; dried powdered leaf rubbed on infant's navel.

SORES

Bucknut, *kohokwi (Simmondsia californica)*, nuts parched, pulverized, and applied dry.

Cañaigre, *siwitcuris (Rumex hymenosepalus)*, roots ground and applied dry; has a drying effect.

Night-blooming cereus, *ho'o'k iwa (Cereus greggii)*, seed pod mixed with deer grease to make salve.

Mesquite gum *(Prosopis velutina)*, pulverized; when applied to sores becomes sticky and caked. Used for impetigo.

TOOTHACHE

Wild bean, *pahwi (Phaseolus acutifolius)*, held between teeth.

STINGS AND BITES

Creosote bush, *cikoi (Covillea glutinosa)*, chewed and placed on bite made by snake, spider, or scorpion.

Mesquite, *kui (Prosopis velutina)*, leaves chewed and placed on sting made by red ant.

EMETIC

Creosote bush, *cikoi (Covillea glutinosa)*, leaves boiled and decoction drunk.

Lizard's tail, *yerba mansa, wawic (Anemopsis californica)*, leaves boiled and decoction drunk.

knowledge, is their heritage from the past, when American Indians developed their own methods of medical treatment quite independently of Europeans. It is their heritage from the past when Europeans expected--and still expect-- Indians to accept European treatments which are very different from their own without being offered sufficient explanation. The Desert People simply do not know many of our European medical concepts--there are not words in the Papago language for many of our common medical terms. So the Desert People can't even think about them, much less understand them.

This briefly states the basic situation which makes it quite certain that real improvement in Papago health not only among farm workers but throughout the whole tribal population awaits an intensive and effective health education program. Techniques for such education are known. The health of the Desert People will improve as those techniques are used.

Health education of school children could of course ultimately solve the difficulty. But ultimately may be a very long time, considering the proportion of Papago children attending school, their attendance records, and the number of years they don't go to school.

An intelligently managed program of sub-professional medical training could pay off in lives and better general health much sooner--soon enough to help the Desert People living in labor camps. It would require nothing more than brief training of medicine men in basic hygenic concepts and practices to effect great improvement.[1]

If medicine men could be taught recognition and treatment of a few basic ills by Indian Bureau doctors, chances are good the better feeling engendered could be used to persuade them to refer to white doctors cases they recognize as beyond their capabilities. The net effect could hardly escape being good, for any measure which gives the Desert People more knowledge of our concepts of disease and its treatment is a step toward better health for them. As long as their primary health problem is lack of knowledge, native medical practitioners are the natural and most efficient avenue for sending them additional knowledge and safety.

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[1] Arguments for such a program and estimates of its effect are presented in Dobyns, et al, 1949, p. 44-48. [i.e. as how to protect their health--Analyst]